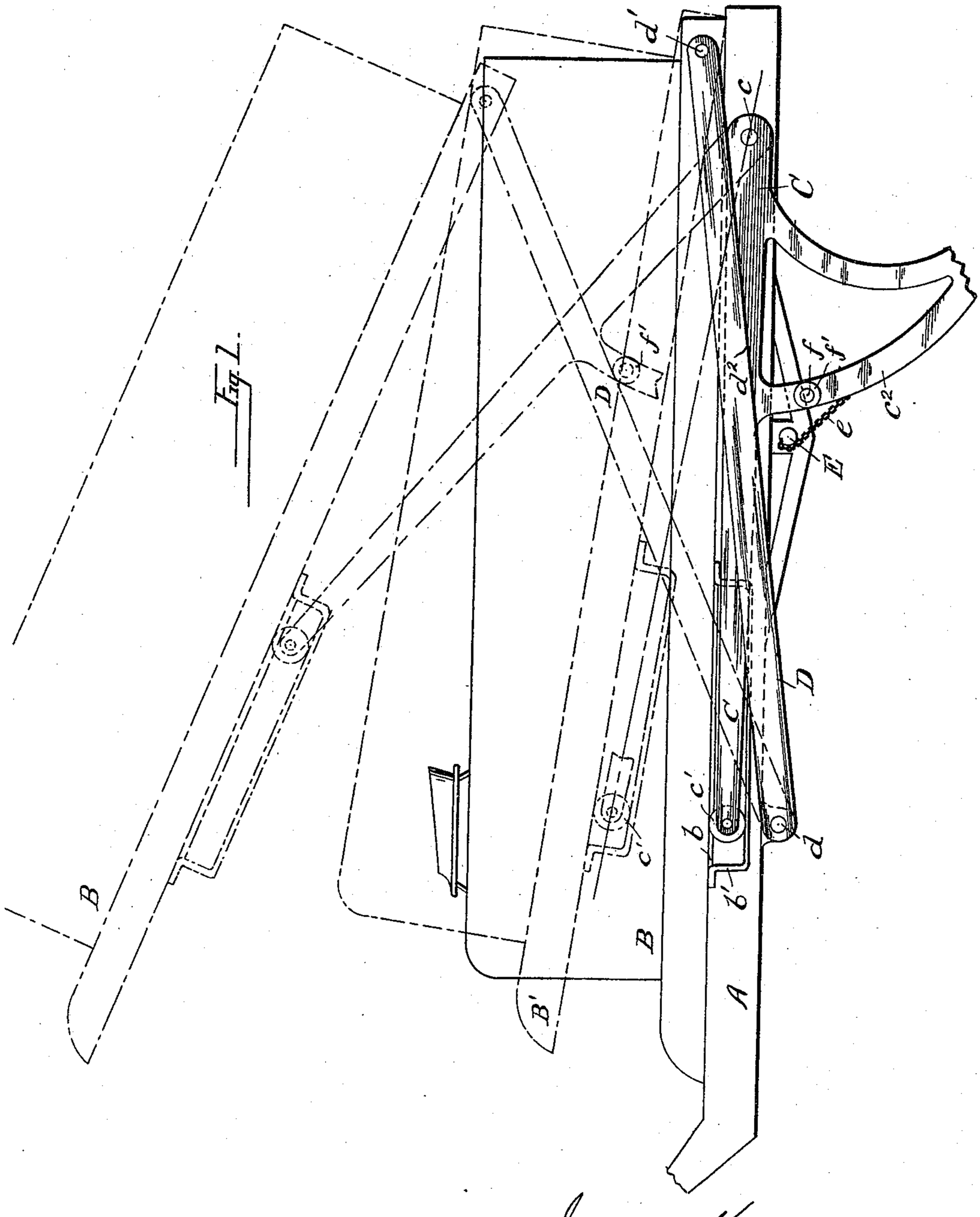
(No Model.)

2 Sheets—Sheet 1.

J. A. KLEES.

DUMPING WAGON.

No. 490,661. Patented Jan. 31, 1893.



Witnesses.
D. A. Keefer
Caleb J. Bieber.

James A. Klees Inventor
By his Attorney H. Stewart

(No Model.) 2 Sheets—Sheet 2.

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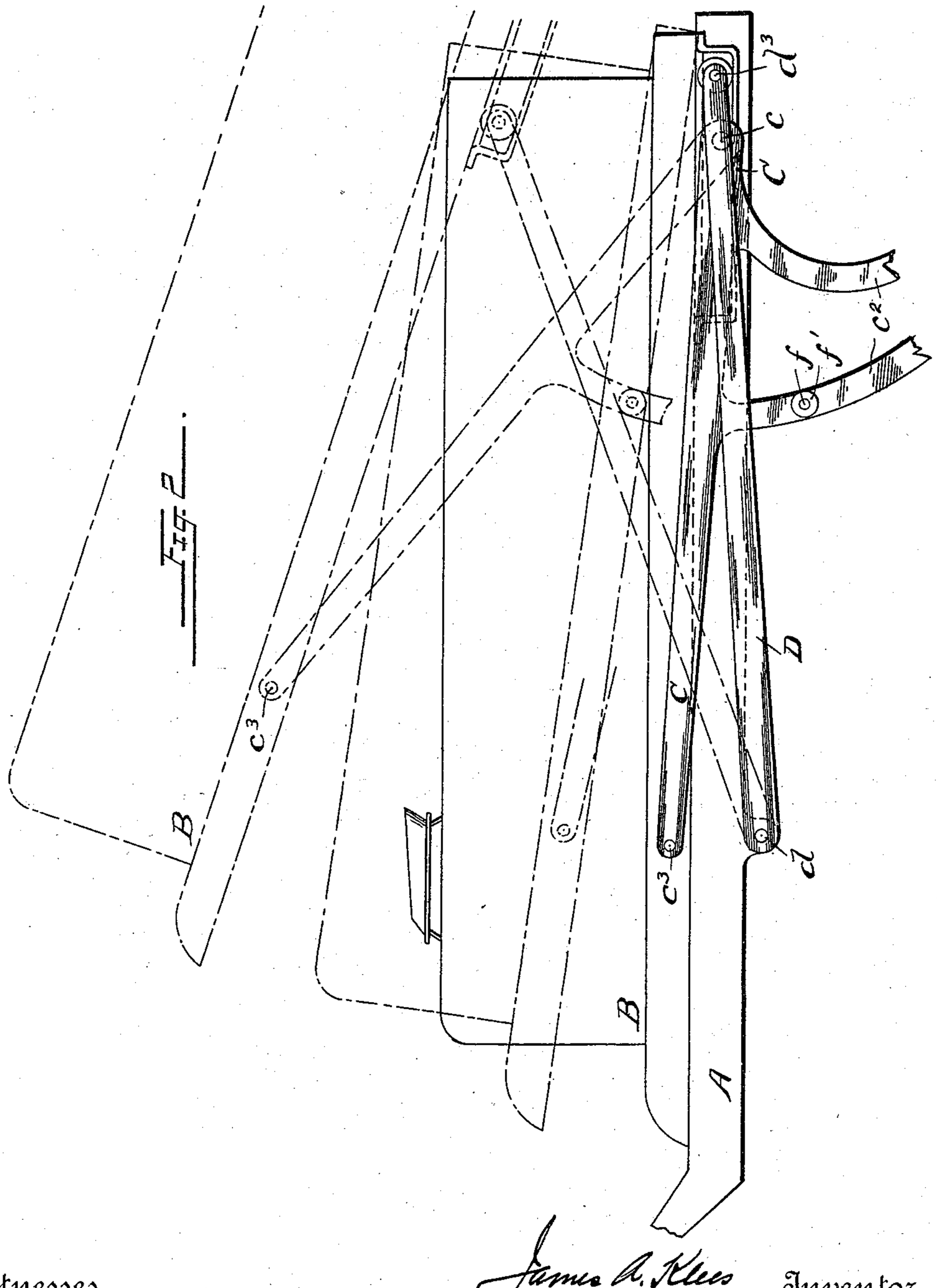

Witnesses
E. A. Kelly Jr.
Caleb J. Bieber.

James A. Klees Inventor

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UNITED STATES PATENT OFFICE.

JAMES A. KLEES, OF READING, PENNSYLVANIA.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 490,661, dated January 31, 1893.

Application filed October 30, 1891. Serial No. 410,319. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. KLEES, a citizen of the United States, residing at Reading, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Dumping-Wagons, of which the following is a specification.

This invention relates to certain improvements in that class of dumping wagons in which folding or radius arms are employed to effect the front and rear elevation of the body.

The purpose of the invention is to provide a simple mechanism whereby one end of the body may first be raised sufficiently to secure a proper dumping angle, and thereafter the whole body be raised substantially vertically. It is fully described in connection with the accompanying drawings.

Figure 1 is a side elevation of a portion of a wagon showing my improved mechanism the body being indicated in dotted lines. Fig. 2 is a similar view showing a slightly modified arrangement.

The frame A of the running gear may be of any ordinary form, as may also the body B.

Referring to Fig. 1 the main elevating arms C,—which like all the mechanism connecting the body with the frame is in duplicate so as to operate equally on both sides of the wagon—is pivoted to a fixed point c toward the rear end of the frame and, extending forward, is provided at its opposite end with a roller c' upon which the forward portion of the body rests. A flange b may be provided on the body to maintain the roller in proper position laterally, and a safety band b' is preferably employed also to maintain a positive connection of the body with the elevating arms, though evidently not essential.

To the rear portion of the body B is pivotally connected at a fixed point d' the supplemental elevating arm B, which, extending forward across the main arm has its opposite lower end pivoted in a similar manner at a point d to the forward portion of the frame. The main arms C are formed with depending quadrants or extensions c^2, the lower ends of which (not shown) are connected by a chain e with a winding shaft E operated by any suitable multiplying gear (not shown). A pin f extending inward from each elevating arm C carries a roller f'; when the body B is lowered so as to rest upon the frame A this roller f' and its supporting pin are some distance below the lower edge d^2 of the supplemental arm D which crosses the main arm.

The operation of elevating the body is a continuous one and its position is positively maintained at any degree of elevation by merely locking the toothed wheels of the multiplying gear as usual. The front is first elevated alone to the first elevated position B' indicated by the dotted lines; the roller f' is by this time brought into contact with the lower edge d^2 of the arm D, which is caused to rise also by the further elevation of the main arm, thus carrying upward the rear end of the body simultaneously with the front end as far as may be desired. It will be noticed that the rear end of the body being fixedly pivoted to the supplemental elevating arms D must necessarily swing on the center d in rising upward, thus moving the body somewhat forward, the movable connection of the forward end of the body with the ends of the main arms permitting the movement. The elevation of the front end being considerably greater than the rear in order to secure a proper incline for dumping the center of the loaded body is practically raised vertically, thus avoiding any overhanging load. Although this substantially vertical raising of the load is thought to be advantageous it is evident that the construction may be readily modified as indicated in Fig. 2 where the main elevating arms are represented as pivoted to a fixed point c^3 at the forward end of the body while the supplemental arms are in movable engagement at d^3 with the rear end, thus causing the point c^3 to swing around the center c, and throwing the body somewhat to the rear. The mechanism and operation however are otherwise similar to that described above in connection with Fig. 1.

Having thus clearly set forth the features of my improved construction I do not intend to limit myself as to matters of detail, but:—

What I claim is:—

The combination with the running gear and body, of main elevating arms and supplemental elevating arms both pivoted to the

frame and extending across each other to opposite portions of the body, one pair being positively pivoted to the body and the other in movable connection with the same, said main arms being arranged to elevate one portion of the body for a limited distance independently of the supplemental arms and thereafter to operatively engage said supplemental arms and thereby elevate both ends of the body simultaneously substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. KLEES.

Witnesses:
ED. A. KELLY,
ADAM L. OTTERBEIN.